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407920

From: Ponnaluri, Padmashri  
Sent: Tuesday, August 13, 2002 4:00 PM  
To: STIC-ILL  
Subject: A request for a copy of reference

Please send me a copy of the following references

Salama et al., BIOPHYSICAL JOURNAL, 47, 456a, 1985.

Waggoner et al., BIOPHYSICAL JOURNAL, 33, 292a, 1981.

(reference 09/740,486)

Thanks

Ponnaluri, P (Shri)

Patent Examiner

Art Unit 1627

703-305-3884

CM1, 3D07.

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BIOPHYSICAL JOURNAL .

PROGRAM AND  
ABSTRACTS

TWENTY-NINTH ANNUAL MEETING

24-28 February 1985

Convention Center, Baltimore, Maryland

W-Pos195 DRUG "FLIP-FLOP" BETWEEN MONOLAYERS OF A MEMBRANE BILAYER AS DEMONSTRATED BY NEUTRON DIFFRACTION. Leo G. Herbert<sup>1,2,3</sup>, David Chester<sup>1</sup> and David G. Rhodes<sup>1,3</sup>. U. of Conn. Health Center, Departments of Medicine<sup>1</sup> and Biochemistry<sup>2</sup>, Farmington, CT 06032. and Dept. Biology, Brookhaven National Laboratory<sup>3</sup>, Upton, NY 11973.

Nimodipine, a 1,4-dihydropyridine (DHP) calcium channel antagonist which associates non-specifically with skeletal sarcoplasmic reticulum (SR), was obtained in deuterated form for experiments to determine the site of this nonspecific association.  $5 \times 10^{-5}$  M protonated or deuterated nimodipine was added to dispersions of sealed SR membrane vesicles which were then sedimented to form membrane multilayers. Neutron diffraction patterns from these multilayers were used to generate difference profiles representing the position of the drug molecules relative to the SR membrane structure. The drug appeared at a position corresponding to the outer knob region of the Ca-ATPase and at two positions symmetrically disposed within the lipid bilayer, a greater portion appearing in the inner monolayer. It has been shown for the SR membrane that the inner monolayer contains approximately 8% more lipid than the outer monolayer (Herbert *et al.* (1984) ABB 234 235-242). Since nimodipine and other DHP's exhibit very high partition coefficients, it has been suggested that the partitioning of these drugs in a lipid bilayer may be an integral part of the approach of these drugs to their active site on sarcolemmal membrane calcium channels. That these drugs appear in the inner membrane, and can therefore "flip-flop", allows for the additional possibility that the DHP binding site on the calcium channel protein could be at the level of the inner monolayer. (Supported by NIH HL-32588, NIH HL-07420 and the American Heart Association. LGH is a Charles E. Culpepper Foundation Fellow)

W-Pos196 CALMODULIN DEPENDENCE OF CALCIUM TRANSPORT BY ISOLATED TRANSVERSE TUBULE VESICLES. Ana Maria Garcia and Cecilia Hidalgo. Boston Biomedical Research Institute, Dept. Muscle Research. Boston, Ma 02114.

Transverse tubule (T-tubule) vesicles isolated from rabbit skeletal muscle are capable of transporting  $\text{Ca}^{2+}$  with high affinity ( $K = 5 \times 10^{-7}$  M), at a rate of  $10 \text{ nmol mg}^{-1} \text{ min}^{-1}$ , in an ATP dependent fashion. Addition of a specific inhibitor of calmodulin stimulation, compound 48/80, strongly inhibited the rate of transport at sub-maximal  $[\text{Ca}^{2+}]$ , suggesting the presence of endogenous calmodulin. The inhibition by compound 48/80 was reversed by addition of exogenous calmodulin. Upon removal of the endogenous calmodulin by treatment with 5 mM EGTA and 0.6 M KCl, the T-tubule vesicles displayed calcium transport with lower affinity than the intact vesicles ( $K = 1 \times 10^{-6}$  M). However, upon addition of calmodulin, the  $K$  for  $\text{Ca}^{2+}$  decreased to  $3 \times 10^{-7}$  M. The rate of transport at saturating  $[\text{Ca}^{2+}]$  was independent of the presence of calmodulin and it was comparable to the rate of transport of untreated vesicles. Thus, calmodulin increases the affinity of the T-tubule transport system for  $\text{Ca}^{2+}$ . Studies on intact vesicles indicated that at least 80% of the vesicles are tightly sealed and are oriented with the cytoplasmic side to the outside. Therefore, it appears that this calcium transport system may play a role in removing excess calcium from the sarcoplasm to the T-tubule lumen. Supported by NIH grant HL23007 and a MDA postdoctoral fellowship to A.M.G.

W-Pos197 SULFHYDRYL REAGENT DYES TRIGGER THE RAPID RELEASE OF  $\text{Ca}^{2+}$  FROM SARCOPLASMIC RETICULUM VESICLES (SR). Guy Salama, Alan S. Waggoner and Jonathan Abramson. University of Pittsburgh, Department of Physiology; Carnegie-Mellon University, Fluorescence Center, Pittsburgh, PA 15261 and Portland State University, Physics Department, Portland OR 97207

Silver ions and other sulfhydryl reagents have been recently shown to trigger the rapid release of  $\text{Ca}^{2+}$  from SR. Moreover,  $\text{Ag}^+$  was found to act on sulfhydryl group(s) of an SR protein which may be the physiological site for  $\text{Ca}^{2+}$  release (G. Salama and J. Abramson, JBC. 259:11363 1984). In principle, reactive sulfhydryl dyes containing an iodoacetyl-group attached to various cyanine types of chromophores would form covalent bonds with sulfhydryl groups on the SR protein and thereby trigger  $\text{Ca}^{2+}$  release. Several dyes were tested for their ability to trigger release, three dyes RGA 563, RGA 412 and DCR 44, like  $\text{Ag}^+$ , induced rapid  $\text{Ca}^{2+}$  release. SR isolated from rabbit white skeletal muscle were suspended at 0.2 to 1 mg prot./ml in 100 mM KCl, 1-5 mM  $\text{MgCl}_2$ , 30 mM imidazole, pH 6.7 at 23°C.  $\text{Ca}^{2+}$  in the extravascular space was measured through the differential absorption changes of antipyrilazo III at 720-790 nm. Additions of  $\text{Ca}^{2+}$  then ATP initiated active  $\text{Ca}^{2+}$  transport by SR and produced large  $\text{Ca}^{2+}$  gradient. Subsequent additions of these sulfhydryl reagent dyes (5 to 50  $\mu\text{M}$ ) triggered rapid  $\text{Ca}^{2+}$  release which could be blocked by prior additions of either ruthenium red (5-25  $\mu\text{M}$ ) or tetracaine (0.2 to 1mM). These fluorescent dyes were used to label and isolate SR proteins and may help identify the physiological  $\text{Ca}^{2+}$  release "channel."

This work was supported and may help us identify and characterize the physiological  $\text{Ca}^{2+}$  release "channel". Supported by NIH R01-NS18590 and K04 NS00909 to G.S., NS 19353 to A.W., and AHA and Alaska AHA Affiliate to J.A.

## WEST Search History

DATE: Tuesday, August 13, 2002

<u>Set Name</u> side by side	<u>Query</u>	<u>Hit Count</u>	<u>Set Name</u> result set
<i>DB=USPT,PGPB,JPAB,EPAB,DWPI; PLUR=NO; OP=OR</i>			
L7	L6 and sulphonate	10	L7
L6	L5 and luminescen\$4	225	L6
L5	cyanine near2 dye	5714	L5
L4	L3 and (aromatic adj nucleus)	32	L4
L3	L1 and luminescen\$4	5351	L3
L2	L1 and luminuscen\$4	0	L2
L1	cyanine dye	260130	L1

END OF SEARCH HISTORY

**WEST**[Generate Collection](#)[Print](#)**Search Results - Record(s) 5 through 10 of 10 returned.**☐ **5. Document ID: US 6342326 B1**

L7: Entry 5 of 10

File: USPT

US-PAT-NO: 6342326

DOCUMENT-IDENTIFIER: US 6342326 B1

TITLE: Synthesis and use of acyl fluorides of cyanine dyes

DATE-ISSUED: January 29, 2002

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Milton; Raymond C.	La Habra	CA		

US-CL-CURRENT: 430/93; 430/581, 435/6, 436/519, 536/25.32, 548/427

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC
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☐ **6. Document ID: US 6329144 B1**

L7: Entry 6 of 10

File: USPT

US-PAT-NO: 6329144

DOCUMENT-IDENTIFIER: US 6329144 B1

TITLE: Probe for analysis of target nucleic acids

DATE-ISSUED: December 11, 2001

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Kubista; Mikael	Molnlycke			SE
Svanvik; Nicke	Göteborg			SE

US-CL-CURRENT: 435/6; 436/94, 536/24.3

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC
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☐ **7. Document ID: US 6200743 B1**

L7: Entry 7 of 10

File: USPT

US-PAT-NO: 6200743

DOCUMENT-IDENTIFIER: US 6200743 B1

TITLE: Radiation-sensitive emulsion, light-sensitive silver halide photographic film material and radiographic intensifying screen-film combination

DATE-ISSUED: March 13, 2001

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Elst; Kathy	Kessel			BE
Verbeeck; Ann	Begijnendijk			BE
Callant; Paul	Edegem			BE

US-CL-CURRENT: 430/576; 430/581

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	KWIC
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☐ 8. Document ID: US 6140494 A

L7: Entry 8 of 10

File: USPT

US-PAT-NO: 6140494

DOCUMENT-IDENTIFIER: US 6140494 A

TITLE: Squarate dyes and their use in fluorescent sequencing method

DATE-ISSUED: October 31, 2000

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Hamilton; Alan Lewis	Amersham			GB
West; Richard Martin	Middlesex			GB
Cummins; William Jonathan	Herts			GB
Briggs; Mark Samuel Jonathan	Buckinghamshire			GB
Bruce; Ian Edward	Dunslaughlin			IE

US-CL-CURRENT: 536/26.6; 549/510

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	KWIC
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☐ 9. Document ID: US 6133445 A

L7: Entry 9 of 10

File: USPT

US-PAT-NO: 6133445

DOCUMENT-IDENTIFIER: US 6133445 A

TITLE: Rigidized trimethine cyanine dyes

DATE-ISSUED: October 17, 2000

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Waggoner; Alan S.	Pittsburgh	PA		
Mujumdar; Ratnakar B.	Pittsburgh	PA		

US-CL-CURRENT: 546/36; 435/4

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	KWIC
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☐ 10. Document ID: DE 3943862 A1 DE 3912046 A JP 02191674 A US 5268486 A US 5486616 A US 5569587 A US 5569766 A US 5627027 A DE 3943817 A1 JP 10088012 A JP 10096727 A JP 2757965 B2 JP 2898264 B2 DE 3943817 C2

L7: Entry 10 of 10

File: DWPI

Mar 28, 2002

DERWENT-ACC-NO: 1990-084578

DERWENT-WEEK: 200229

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TITLE: New luminescent dyes - of cyanine, merocyanine or styryl type, contg. sulpho  
gps., useful for labelling components in aq. media

INVENTOR: WAGGONER, A S; ERNST, L A ; MUJUMDAR, R B

PRIORITY-DATA: 1988US-0240756 (September 2, 1988), 1986US-0854347 (April 18, 1986),  
1992US-0884636 (May 15, 1992), 1993US-0158952 (November 29, 1993), 1992US-0882802  
(May 14, 1992), 1995US-0424219 (April 19, 1995), 1993US-0158953 (November 29, 1993),  
1992US-0831759 (September 22, 1992)

## PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
DE 3943862 A1	March 28, 2002		000	C09B023/16
DE 3912046 A	March 15, 1990		025	
JP 02191674 A	July 27, 1990		000	
US 5268486 A	December 7, 1993		017	C07D209/02
US 5486616 A	January 23, 1996		014	C07D413/06
US 5569587 A	October 29, 1996		018	C12Q001/68
US 5569766 A	October 29, 1996		018	C07D417/06
US 5627027 A	May 6, 1997		012	C12Q001/68
DE 3943817 A1	February 26, 1998		000	C09B062/002
JP 10088012 A	April 7, 1998		016	C09B023/00
JP 10096727 A	April 14, 1998		016	G01N033/533
JP 2757965 B2	May 25, 1998		021	C09B023/00
JP 2898264 B2	May 31, 1999		017	C09B023/00
DE 3943817 C2	July 12, 2001		000	C09B062/002

INT-CL (IPC): A61K 47/00; C07D 209/02; C07D 209/56; C07D 413/06; C07D 417/06; C07H  
3/06; C07H 21/04; C07K 15/00; C09B 23/00; C09B 23/01; C09B 23/14; C09B 23/16; C09B  
62/00; C09B 62/002; C09B 69/10; C09K 11/06; C12N 15/00; C12P 21/04; C12Q 1/04; C12Q  
1/68; G01N 33/533; G01N 33/58

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	KWIC
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L6 and sulphonate	10

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